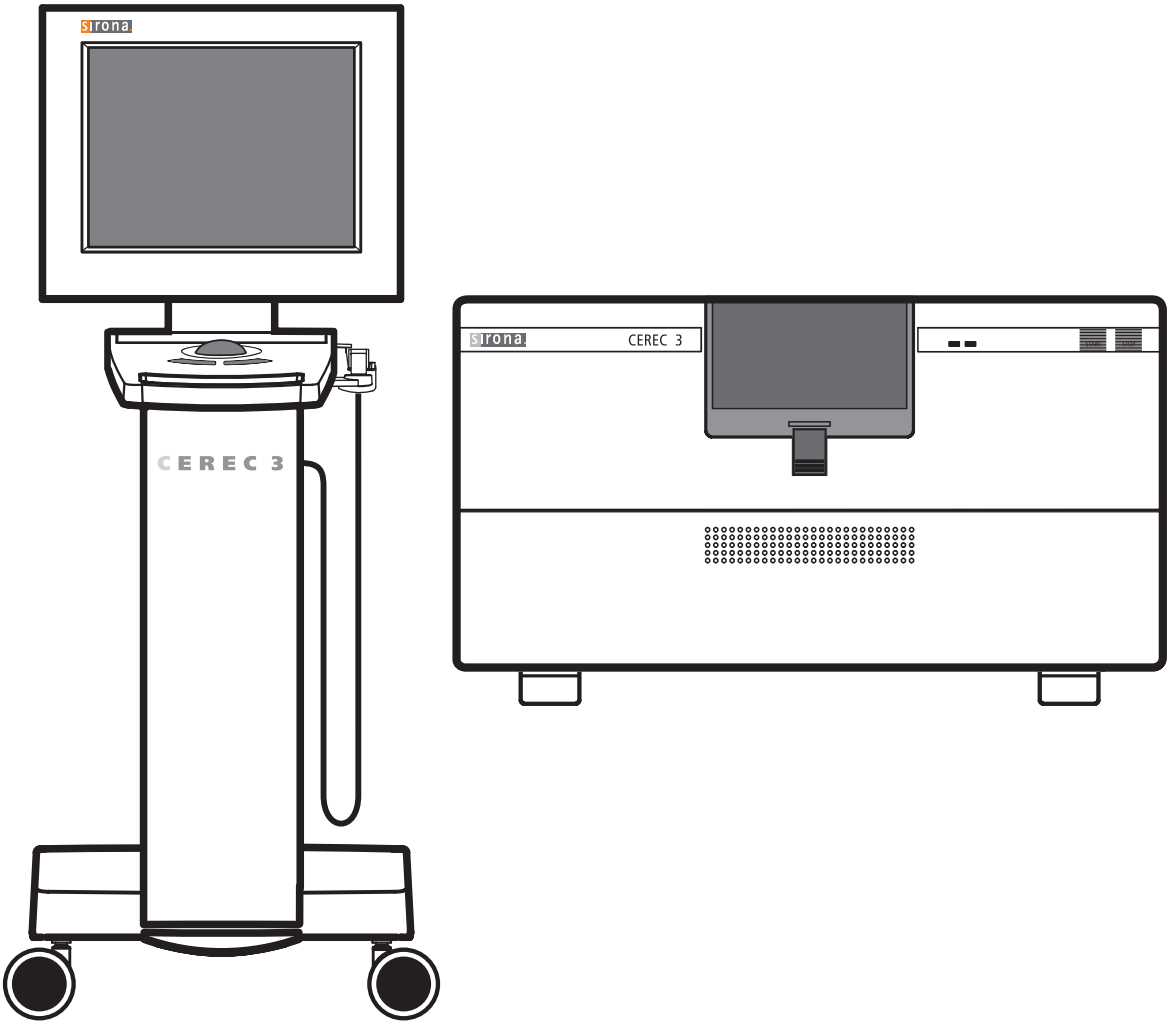
New as of: 11.2006

sirona
The Dental Company

CEREC 3 / *Scan* / Chairline, inLab

Maintenance Protocol

English

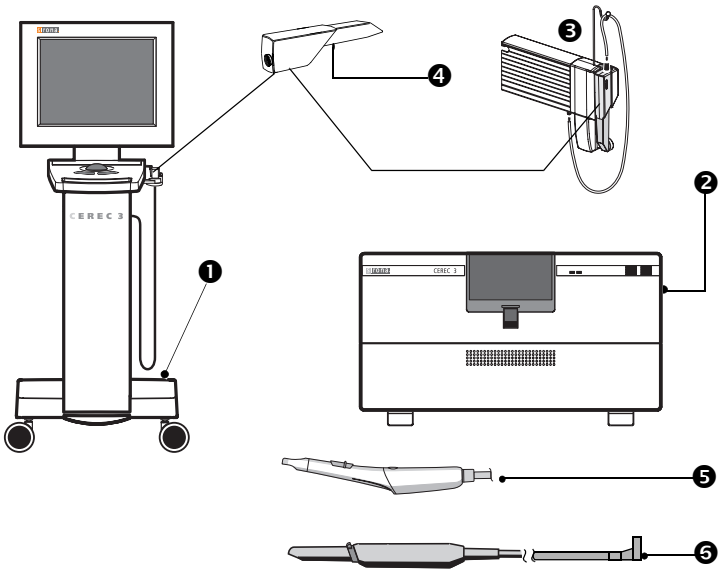


CEREC 3 / *Scan* / Chairline, inLab

Protocol for annual maintenance

Customer	Dealer
Address, tel.:	**Address, tel.:**

Serial numbers



Item	Serial no.
❶	
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❻	

	☑
CEREC 3 acquisition unit	☐
CEREC 3 milling unit	☐
CEREC *Scan*	☐
inLab	☐
CEREC Chairline	☐
3D camera	☐
SIROCAM 3 camera	☐
SIROCAM 3 module	☐
SIROCAM 2 camera	☐
SIROCAM 2 module	☐
SIDEXIS module	☐

Prior to starting maintenance, a function check was performed and any defects found were disclosed to the practice staff. These defects will NOT be corrected as part of this maintenance job.

Maintenance was performed according to this maintenance protocol using OEM parts from Sirona.

Date of maintenance	Engineer's name	Signature

59 19 712 D 3344
D 3344.105.01.07.02

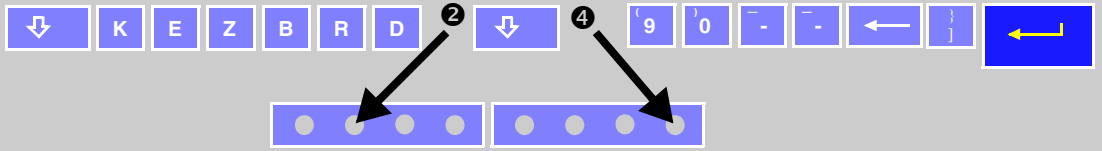
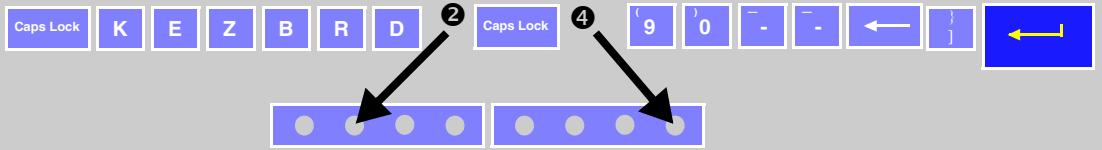
Acquisition unit

Component	Work to be performed	Spare part	REF.	Qty
Cover	Check covers and control unit for damage (cracks, parts broken off).	-	-	-
Power supply cable	Check for correct seating and damage.	-	-	-
Castors (lockable)	Check condition of castors. Check functioning of parking brake.	Castor with lock	41 82 403	2
Castors (nonlockable)	Check condition of castors.	Castor without lock	41 82 395	2
Fan, unit base	Check functioning. The air current must enter the unit from its base. Remove the filter mat first. Check the air current e.g. with a piece of paper.	Auxiliary fan	58 97 637	1
Filter	Open filter cover in unit base and replace filter.	Filter	58 33 046	1
Fan, PC power supply	Check functioning. The air current must flow out of the PC power supply unit. Check the air current e.g. with a piece of paper.	PC power supply	58 97 629	1
Fan, SIROCAM (optional)	Check functioning. The air current must flow to the front out from the SIROCAM drawer. Check the air current e.g. with a piece of paper (SIROCAM 2 only).	Light module, compl.	58 55 114	1
3D camera	Check camera for physical damage to the plastic housing and the glass prism.	-	-	-
3D camera	Image quality check (live and recorded images). Acquire a recorded image of calibration set B. Recalibrate camera if necessary. **With 3D software**: Have the system calculate the 3D model. Check the waviness of its horizontal surfaces and the height scale accuracy (using the Distance window). **With COS software**: Check for ripple and height scale accuracy in the Section window.	-	-	-
Heater, 3D camera	Check functioning. The heater must reach a surface temperature of approx. 50°C within max. 5 minutes after the unit is switched on.	Heater	58 11 190	1
Heater, 3D camera	Check distance between glass prism of 3D camera and surface of heater. A distance of 1 - 2 mm should result with the camera set down. If the distance is too small, compensate by shimming with spacer plate.	Spacer plate	59 24 134	1
SIROCAM camera (optional)	Check exit window for damage. Check the camera separating point for secure seating.	-	-	-

Acquisition unit

Component	Work to be performed	Spare part	REF.	Qty
SIROCAM camera (optional)	Check the quality of the SIROCAM image in the application used for color fidelity, blooming and streakiness. Note color differences between live and frozen image.	-	-	-
Sirocam heater (optional)	Check functioning. The heater must reach a surface temperature of approx. 50°C within max. 5 minutes after the unit is switched on (SIROCAM 2 only).	SIROCAM heater, compl.	58 32 907	1
SIROCAM heater (optional)	Check distance between exit window of SIROCAM camera and surface of heater. A distance of 1 - 2 mm should result with the camera set down. If the distance is too small, compensate by shimming with spacer plate (SIROCAM 2 only).	Spacer plate	59 24 134	1
Trackball	Remove and clean trackball. Clean wiper ring (only NSI trackball, i.e. ball with adjustable ease of action).	-	-	-
Buttons / pedals	Check functioning of foot switch pedal and of right and left mouse buttons.	-	-	-
LCD monitor	Check display surface of LCD monitor for dirt and grime. If necessary, clean with a special monitor glass cleanser and a soft cloth. Caution: Do not exert strong force on the display surface!	-	-	-
LCD monitor	Check Auto Adjust function (see service manual, Chap. 4.6 "Monitor image flickering").	-	-	-
LCD monitor	Check swivel and tilt functions of LCD monitor.	-	-	-

Acquisition unit

Component	Work to be performed	Spare part	REF.	Qty
Keyboard	Switch the unit on and start a word processing program (e.g.: Editor). **For spacebars with 3 touch points:** Press the following keys in succession:  If the character string **kezbrd 90** then appears on the screen and the cursor flashes at the start of the next line, all keyboard functions are operating properly. **For spacebars with 4 touch points:** Press the following keys in succession: **USA**  **GB**  If the character string **KEZBRD 90-]** then appears on the screen and the cursor flashes at the start of the next line, all keyboard functions are operating properly. Quit the word processing program. Check whether there are any cracks in the foil or its edges have started to come undone (peel off).	Keyboard USA Keyboard GB	58 73 125 59 00 142	1
X-ray module (optional)	Check whether the three X-ray LEDs on the keyboard signal a correct condition following switch-on (alternate flashing at first followed by continuous illumination of the green LED).	-	-	-
X-ray module (optional)	Attach X-ray sensor and make the unit ready for exposure via the SIDEXIS application to test it.	-	-	-

Acquisition unit

Component	Work to be performed	Spare part	REF.	Qty
PC drawer	Check whether the drawer of the DVD/CD drive strikes the door when the latter is open. Readjust the Velcro strap of the door fastening if necessary. To do this, take out the metal insert on the inside of the door, loosen the self-adhesive Velcro strap and refasten it with the correct length. Replace the metal insert in the door.	-	-	-
Software	Check whether the latest version is installed. If necessary, perform an update after consulting with the user.	COS software update	58 74 115	1
		3D software update	59 77 173	1

CEREC Chairline

Component	Work to be performed	Spare part	REF.	Qty
3D camera	Check camera for physical damage to the plastic housing and the glass prism.	-	-	-
3D camera	Image quality check (live and recorded images). Acquire a recorded image of calibration set B. Recalibrate camera if necessary. **With 3D software**: Have the system calculate the 3D model. Check the waviness of its horizontal surfaces and the height scale accuracy (using the Distance window).	-	-	-
Heater, 3D camera	Check functioning. The heater must reach a surface temperature of approx. 50°C within max. 5 minutes after the unit is switched on.	Heater	58 11 190	1
Foot switch pedal	Check functioning of foot switch pedal.	-	-	-

Milling unit

Component	Work to be performed	Spare part	REF.	Qty
CC controller board	We recommend replacing the lithium battery on the control board as part of maintenance after 3 years, and then every 3 years thereafter.	Lithium battery	48 91 219	1
Housing	Check general condition. Test function of tank door. Remove any residual adhesive foil from the magnets. Reglue the magnetic locks if necessary.	-	-	-
Milling chamber door	Check for cracks and leaks . Check functioning of lock.	Protection window	41 68 428	1
LEDs / keys	Check functioning according to operating instructions.	-	-	-
Cover plate for electronics	Check whether the button on the board can be actuated via the download key. Replace the cover plate if necessary.	Cover plate with button	59 19 662	1
Software	Accept data from ***Info milling unit*** (serial number, milling time of cylindrical diamond, milling time of tapered diamond, total milling time, total scanning time).	-	-	-
Air system	Check pump with pressure switch via Service Software. Check the air outlet at the instruments.	-	-	-
Fan	Execute the ***Fan unit*** software test (see program option "Service -> Media supply").	-	-	-
Water system	Retrofit the pressure cylinder expansion kit if it has not already been installed. Check pump with pressure switch via Service Software. Check pump, cooler, hoses and flanges for leakage. Check whether there is any leakage of fluid at the shafts and plugs of the milling chamber. Water must be emitted at all nozzles of the gearbox and strike all milling instruments at the same height.	Pressure cylinder expansion kit	58 85 673	1
Water system	We recommend cleaning the water paths of the milling unit with DENTACLEAN (refer to Operating Instructions 59 85 747).	DENTACLEAN	59 88 543	1
Tank	Replace complete tank. Also replace O-ring on suction connection.	Tank cover Tank O-ring	59 42 763 47 04 792 70 03 189	1 each
Light barriers	Blow out light barriers (remove dirt). Check ring with slit on gearwheel for dirt and clean if necessary. Perform light barrier test with Service Software.	-	-	-

Milling unit

Component	Work to be performed	Spare part	REF.	Qty
Gear wheels	Determine distortion of the gear wheels by checking their backlash during rotation. To do this, remove the housing cover and turn the relevant gear. The corresponding gear wheels must also turn without backlash. Remove front covers and replace gear wheel stops.	Gear wheel stop	33 09 098	4
Block screw	Replace old block screw with new one.	Type VITA	46 91 916	1
Actuators	Test of stepping motors with Service Software. NOTE: Test procedure is relatively loud. There is no danger of damaging the system.	-	-	-
Milling motors	Speed and Touch Test with Service Software.	-	-	-
Gearbox	Load and mill ***Cerec 3D, Patient*** -> ***Inlay04***, ***Tooth 16*** NOTE: As this design may have been deleted by the user, we recommend bringing a disk containing the design to the maintenance site.	-	-	-
Gearbox	Calibrate the milling machine. To do this, check the locking position and the locking button to make sure they do not jam or get stuck (replace locking button if necessary). Following the calibration, insert new instruments. Load the test block with ***Test, Patient -> Pyramid***. Mill it out and measure it. The length of the edge must equal 4.97 mm to 5.07 mm. The difference between the edge lengths must be less than 0.05 mm, the height of the pyramid must equal 5.20 to 5.35 mm.	Step Bur 10, Cylinder Pointed Bur, Cone Bur 10		1 each
Cleaning	Clean scanner window carefully (if scanner is installed), reference point, milling chamber, milling chamber window. Replace wiper band on milling chamber window.	Wiper band	18 74 473	1

Milling unit

Component	Work to be performed	Spare part	REF.	Qty
Scanner	Check for mechanical damage (window). Check the scanner mounting and refasten it if necessary. Sensor - test (Scanner - test) with Service Software. Calibrate scanner. **With 3D software**: Perform a test scan with the “crown framework” model holder using the “WaxUp” design technique. Have the system calculate the model, do not draw any lines, accept the gray restoration proposal. Activate the mesial view (by double-clicking the light green arrow) and then Cut. Measure the maximum cylinder diameter close to the cut edge using the Distance window. The measured values should be 16,0mm +/- 0,1mm both in vertical (occlusocervical) and horizontal (buccolingual) direction. **With COS software**: Execute ProbeScan with "pot holder". Measure with Section window of software. To do this, call up the Cursor window with "Window -> Cursor". Measure the pot holder from the left to the right edge by entering the position of the first (x) coordinate. The result must lie within the range of 640 -3/+7 pixels.	-	-	-
	Complete the maintenance protocol. Hand the unit over to the customer.	Maintenance Protocol CEREC 3 / *Scan* / Chairline, inLab	59 19 712	1

Maintenance set

The maintenance set (REF: 59 19 670) contains the following components:

Component	REF.	Qty
Tank, compl. comprising:		
cover, filter	59 42 763	
tank,	47 04 792	
O-ring	70 03 189	1 each

Component	REF.	Qty
Gear wheel stop	33 09 098	4
VITA block screw	46 91 916	1
Step Bur 10		1
Cylinder Pointed Bur		1
Cone Bur 10		1
Wiper band	18 74 473	1
Filter	58 33 046	1
Spacer plate	59 24 134	2

The following items should be taken along for any repairs/retrofits/cleanings which may prove necessary:

Component	REF.	Qty
Pressure cylinder expansion kit	58 85 673	1
Locking button	59 08 921	2
Cover plate with button	59 19 662	1
Castor with lock	41 82 403	2
Castor without lock	41 82 395	2
Auxiliary fan	58 97 637	1
Keyboard (USA) Keyboard (GB)	58 73 125 59 00 142	1
Lithium battery	48 91 219	1
Block changing tool	27 95 995	1

Component	REF.	Qty
Torque wrench (Bur changing tool)	41 66 265	1
Protection window	41 68 428	1
DENTACLEAN	59 88 543	1
COS software update	58 74 115	1
3D software update	59 77 173	1

The following special tools and documents must be taken along on maintenance calls:

Component	REF.	Qty
Special tool for locking button	59 08 947	1
Pot holder for ProbeScan	58 85 293	1
Slide gage with 1/100 mm resolution for measuring test block	-	1
Service manual	58 35 694	1
List of Spare Parts	58 62 581	1

We reserve the right to make any alterations which may be required due to technical improvements.

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